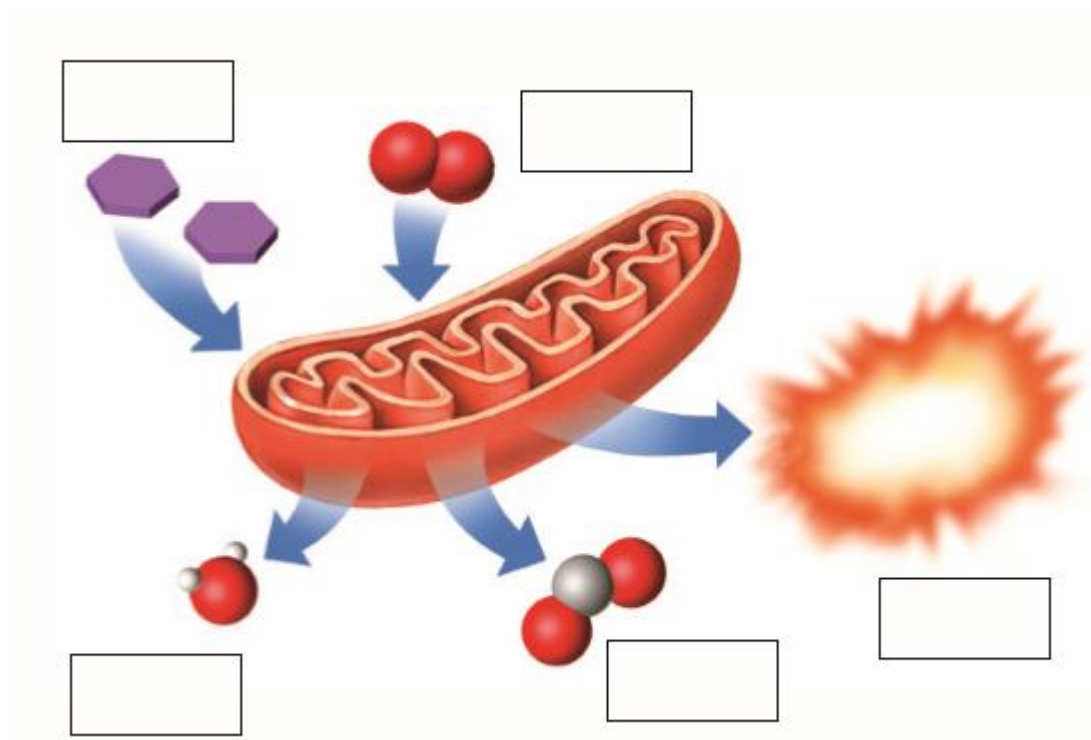
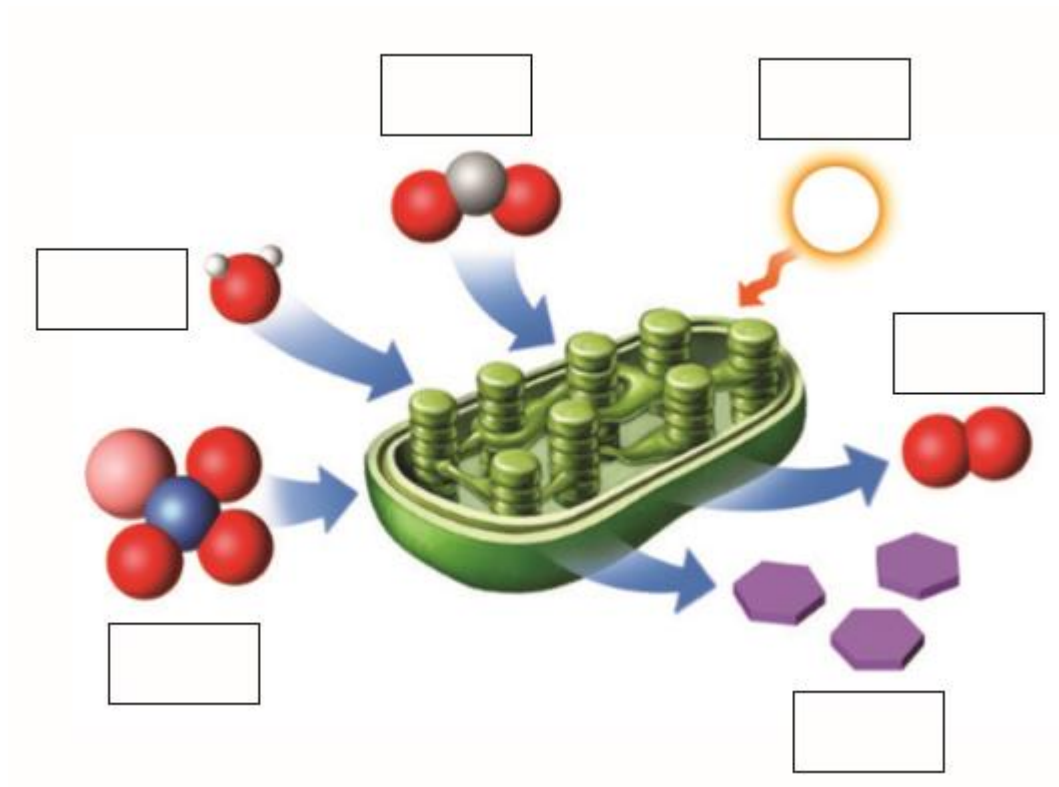


Photosynthesis vs cell respiration



- As O_2 reacts with organic matter, it yields CO_2 , H_2O and chemical energy, which will be stored in the form of current organic molecules called ATP.
- It is the process used by plant cells to convert light energy from the sun into chemical energy, in order to create energy-rich carbohydrate molecules like glucose.
- It takes place in all kinds of eukaryotic cells, which means in animal cells as well as in plant cells.
- Sun provides the primary energy source.
- It is the process of breaking down organic molecules to obtain energy and store it in the form of other organic molecules (ATP).
- It involves two stages:
 - 1st stage: Light dependent reactions: sunlight is captured and kept in the form of chemical energy. O_2 is released.
 - 2nd stage: Light independent reaction: chemical energy is used to synthesize sugar molecules from $CO_2 + H_2O$.
- It always happens in the presence of chlorophyll.
- It takes place within the mitochondria.
- It takes place within the chloroplasts, exclusively in plant cells.
- CO_2 and water are transformed into organic compounds.